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## TRANSMITTAL FORM

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Application Number **09/607,604**

Filing Date **06/30/2000**

First Named Inventor **Allison**

Group Art Unit **2817**

Examiner Name **Cathey, D.**

Total Number of Pages in This Submission **5**

Attorney Docket Number **PD-00W014**

### ENCLOSURES (check all that apply)

☐ Fee Transmittal Form

☐ Fee Attached

☒ Amendment / Response

☐ After Final

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☐ Extension of Time Request

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☐ Certified Copy of Priority Document(s)

☐ Response to Missing Parts/  
Incomplete Application

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Parts under 37 CFR  
1.52 or 1.53

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(for an Application)

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☐ Petition Routing Slip (PTO/SB/69)  
and Accompanying Petition

☐ To Convert a  
Provisional Application

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to Group

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Remarks

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm  
or  
Individual name

**Leonard A. Alkov, Esq.**

Signature

*Leonard A. Alkov*

Date

**01/10/2002**

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PATENT  
PD-00W014

THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

ALLISON et al.

Serial No. 09/607,604

Filed: 06/30/2000

For: MULTI-BIT PHASE SHIFTERS  
USING MEM RF SWITCHES

Art Unit: 2817

Examiner: Cathey, D.

*Amend*  
*RECEIVED*  
*TECHNICAL*  
*FEB 21 2002*  
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RESPONSE TO OFFICE ACTION

Assistant Commissioner for Patents  
Washington, D.C. 20231

Dear Sir:

In response to the Office Action mailed October 10,  
2001, kindly amend the application as follows:

IN THE SPECIFICATION

Amend the paragraph bridging pages 8-9 to the  
following:

--In accordance with an aspect of the invention, a new class of switched line phase shifter configurations using RF MEM switches is provided. FIG. 4A illustrates a schematic of a 1 bit, hybrid switched line phase shift section 100, or "unit cell." Like conventional PIN diode and FET switched phase shifters, the phase shifter is realized by switching in different lengths of transmission lines (FIG. 4). Unlike PIN diode and FET switches, DC bias used to actuate the metal-metal RF MEMS switches is not coupled to the RF transmission line. This embodiment of the unit cell is fabricated on a low-loss substrate 102, e.g. alumina. A conductor pattern is fabricated on the top